S&P Global
Market Intelligence
**451 Research**
**Business Impact Brief**

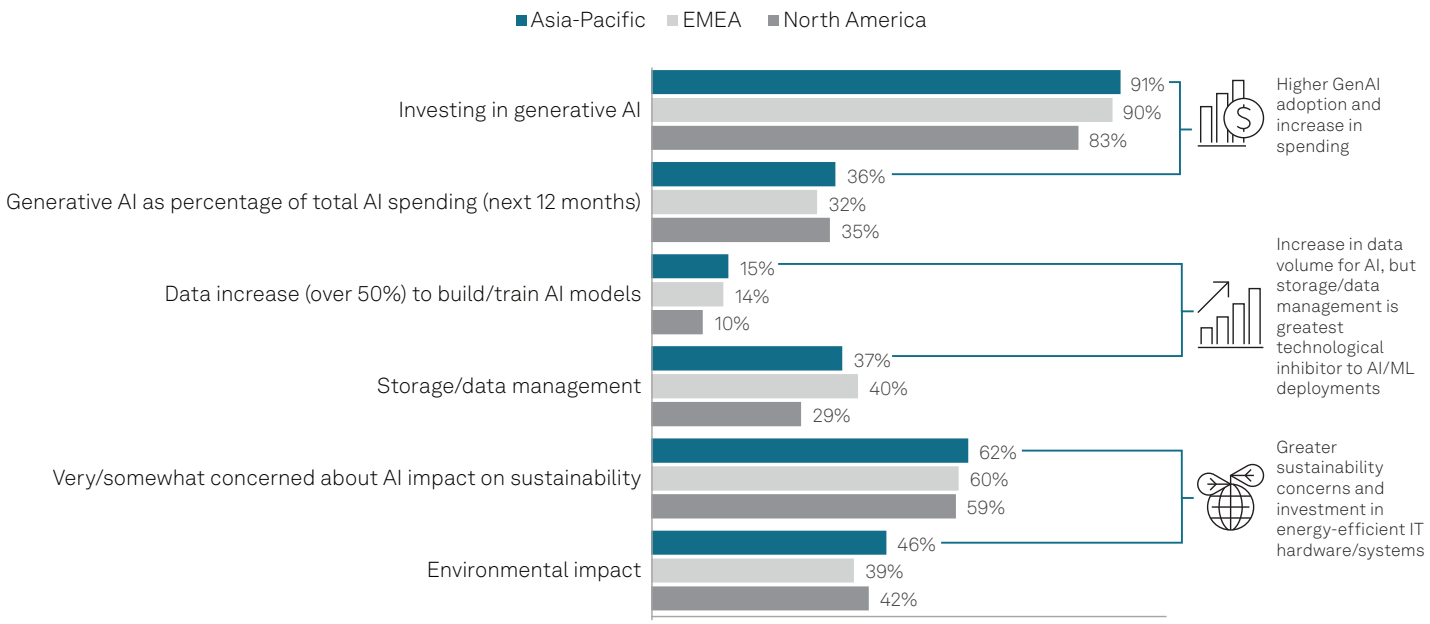
# Asia-Pacific Poised To Leapfrog With Generative AI Investments, but Data and Sustainability Concerns Loom

## The Take

The "AI arms race" is igniting a frenzy of activity worldwide, with different regions investing in and employing diverse strategies to become global AI superpowers. Some of these strategies include forming regulatory environments and governance policies, investing in research and development across public and private sectors, leveraging financial incentives, educating and upskilling the workforce, and deploying an infrastructure capable of handling the intensive demands of AI.

Generative AI has been a global catalyst in reshaping existing strategies and promoting new ones, as well as driving a new wave of investments as countries strive to become AI and market leaders. While EMEA (77% with AI/ML in production) and North America (70%) may have a slight lead over Asia-Pacific (66%) in AI adoption, it is clear that Asia-Pacific respondents view generative AI as a critical innovation that could possibly help them leapfrog others' AI efforts. Asia-Pacific (91%) leads EMEA (90%) and North America (83%) in the percentage of organizations actively investing in generative AI (see figure below). Survey data indicates that generative AI will become a greater priority for Asia-Pacific since companies indicate that a greater share (average of 36%) of their AI spending will be allocated to generative AI over the next 12 months.

### Key Asia-Pacific AI trends in 2024




Source: S&P Global Market Intelligence 451 Research Global AI Trends custom study, 2024.

Asia-Pacific also leads in organizations that have plans to increase data volume by more than 50% to build and train AI models. However, 37% cite storage and data management as the top infrastructure barriers to AI/ML application deployments. Without effectively managing and organizing their data, many of the region's organizations risk unmanageable infrastructure and costly technical debt. Legacy data architectures, along with the diverse, complex and large data volumes typical of AI/ML projects, exacerbate this challenge. Asia-Pacific organizations must collectively get their data house in order before they can support ambitious AI growth plans and avoid significant setbacks.

Stemming from these AI and data management inefficiencies, Asia-Pacific respondents are slightly more concerned about the impact of AI/ML on their energy use and carbon footprint than the other regions. The demanding compute requirements of GPUs to power large language models and run generative AI model training and inference consume significant energy. This creates a growing sustainability concern and can cannibalize AI efforts and growth. To combat this, Asia-Pacific organizations plan to invest in energy-efficient IT hardware and systems in the next 12 months to help combat this AI impact on the carbon crisis.

## Business impact

- **Asia-Pacific organizations are using generative AI for product-centric outcomes that drive top-line growth:** The primary drivers for developing generative AI are improving product/service quality (39% of Asia-Pacific organizations), supporting new product introduction/development (34%), improving time to market (33%) and gaining product or service differentiation (30%).
- **Implementing a best-in-class data strategy is a prerequisite to recognizing AI value and becoming an AI leader:** A data strategy that ensures the access, sourcing and standardization of high-quality data and facilitates its flow through AI modeling and inferencing is critical to AI project success. Data quality is Asia-Pacific organizations' top impediment to moving AI/ML applications from proof of concept and piloting to production.
- **Investing in energy-efficient IT is an impactful combatant of a costly carbon footprint derived from AI growth:** Organizations should consider investments, strategies and technologies that reduce and/or optimize energy consumption across the IT stack as AI projects scale. Key technologies and strategies increasingly being considered include energy-efficient IT equipment (servers, storage, etc.), datacenter cooling, optimizing workloads across the IT estate and energy management software.

## Looking ahead

AI projects are creating massive value and unlocking new opportunities across the market. Generative AI is amplifying this value creation, especially in product-centric outcomes where its capability to rapidly create new content (images, video, text, etc.), product designs and prototypes has ushered in a new era of products. Asia-Pacific organizations are poised to capitalize on these product-creation capabilities to drive top-line revenue, as well as apply generative AI to business processes to increase efficiency, reduce operating costs and improve the bottom line.

To recognize these benefits, Asia-Pacific companies are investing slightly more in generative AI than their EMEA and North American counterparts. However, the benefits of generative AI come with environmental costs. The IT infrastructure required to support the data consumption of these data-intensive AI projects is significant and leads to increased energy consumption, carbon footprint and environmental impact. With data and AI projects set to rise, Asia-Pacific organizations are focused on tackling inefficiencies in IT infrastructure and data architecture to prevent insurmountable challenges and mitigate extensive, irreversible impacts on both the organization's financials and the environment.